

NMMP EMERGENCY PREPAREDNESS AND EVACUATION PLAN REGULATORY REQUIREMENTS

NMMP improvements will be subject to federal and state laws, county ordinances and regulations and mitigation measures identified in the EIR. The key provisions that would address hazards and emergencies within the plan area are summarized below.

1.0 Fire Prevention and Response

1.1 *California Public Resources Code Section 4291*

California Public Resources Code (PRC) Section 4291 sets forth minimum fire safety standards for development in or adjoining mountainous areas and forest-covered lands. Provisions that would apply to development under the NMMP include:

- Defensible space must be maintained 100 feet from the side, front and rear of a structure, or up to the property line where the property line is less than 100 feet from the structure;
- Any portion of a tree that extends within 10 feet of the outlet of a chimney or stovepipe must be removed;
- Any tree, shrub, or other plant adjacent to or overhanging a building must be free of dead or dying wood;
- The roof of any structure must be free of leaves, needles, or other vegetative materials;
- Prior to constructing a new building, the owner shall obtain a certification from the local building official that the dwelling or structure, as proposed to be built, complies with all applicable state and local building standards.
- Prior to final inspection approval of any building, the Fire Department must inspect the building and the fire suppression facilities to certify that the fire suppression improvements comply with Building Code and fire department service requirements.

Violation of the above provisions may result in a fine. PRC Section 4291 also requires the Department of Forestry and Fire Protection (CalFire) to develop, periodically update and post on the internet a guidance document regarding fuels management. The full text of the measure is provided in **Appendix D** of the NMMP EPEP.

The NCSD/NFD has had a defensible space program for the past 20 years. This program entails a physical inspection of every property in the department's jurisdiction for compliance with California's defensible space laws. Properties that are not in compliance at the time of the first inspection receive follow-up visits and notices until they are brought into compliance.

1.2 *Placer County General Plan*

The *Placer County General Plan* (2013) includes policies regarding fire protection and emergency medical services within Placer County. The General Plan policies and NMMP consistency are as follows:

TABLE 1

PLACER COUNTY GENERAL PLAN CONSISTENCY ANALYSIS – FIRE PROTECTION AND EMERGENCY MEDICAL SERVICES

Policies	Consistency Determination	Analysis
Policy 4.A.1: Where new development requires the construction of new public facilities, the new development shall fund its fair share of the construction. The County shall require dedication of land within newly developing areas for public facilities, where necessary.	Consistent	The proposed NMMP would not require the construction of any new public facilities related to fire protection or emergency medical services. Proposed structures and facilities would be required to pay applicable NCSD fire mitigation fees.
Policy 4.A.2: The County shall ensure through the development review process that adequate public facilities and services are available to serve new development. The County shall not approve new development where existing facilities are inadequate unless the following conditions are met: a. The applicant can demonstrate that all necessary public facilities will be installed or adequately financed (through fees or other means); and b. The facility improvements are consistent with applicable facility plans approved by the County or with agency plans where the County is a participant.	Consistent	See analysis for Policy 4.A.1.
Policy 4.I.3: The County shall require new development to develop or fund fire protection facilities, personnel, and operations and maintenance that, at a minimum, maintain the above service level standards.	Consistent	See analysis for Policy 4.A.1.
Policy 8.C.1: The County shall ensure that development in high-fire-hazard areas is designed and constructed in a manner that minimizes the risk from fire hazards and meets all applicable state and county fire standards.	Consistent	The entire project site is designated as either Very High or High Fire Hazard Severity Zone. The proposed improvements would be designed and developed to meet all applicable state and local fire standards. Northstar has been implementing forest fuel reduction measures and plan to continue fuel reduction treatments as part of the Northstar Habitat Management Plan (Appendix 3.3 in the NMMP EIR).
Policy 8.C.2: The County shall require that discretionary permits for new development in fire hazard areas be conditioned to include requirements for fire-resistant vegetation, cleared fire breaks, or a long-term comprehensive fuel management program. Fire hazard reduction measures shall be incorporated into the design of development projects in fire hazard areas.	Consistent	See analysis for Policy 8.C.1.
Policy 8.C.3: The County shall require that new development meets state, County, and local fire district standards for fire protection.	Consistent	See analysis for Policy 8.C.1.

Policies	Consistency Determination	Analysis
Policy 8.C.5: The County shall ensure that existing and new buildings of public assembly incorporate adequate fire protection measures to reduce the potential loss of life and property in accordance with state and local codes and ordinances.	Consistent	See analysis for Policy 8.C.1.
Policy 8.C.10: The County shall continue to implement state fire safety standards through enforcement of the applicable standards contained in the Placer County Land Development Manual.	Consistent	The proposed project will be designed and constructed in accordance with all applicable state and local fire safety standards, including those contained in the Placer County Land Development Manual. Furthermore, Placer County and the Northstar Community Services District will review the proposed project to ensure fire hazards are minimized to the greatest extent feasible at the project site.

1.3 Placer County Fire Code

Placer County has adopted the 2013 California Building Code, Title 24 of the California Code of Regulations, and the 2013 Fire Code (Sections 15.04.700 and 15.04.710 Fire Code Amendment). The Fire Code addresses emergency access, access gates, sprinkler systems, fire alarms within buildings, and construction of access roads to accommodate fire apparatus. The Fire Code requires that an automatic fire sprinklers and/or fire extinguishing system be installed throughout new one- and two-family dwellings and commercial buildings 3,600 square feet and larger. NMMP skier service sites would be required to meet California Building Code requirements.

1.4 Martis Valley Community Plan

The Martis Valley Community Plan (MVCP) covers the 25,570 acres of the Martis Valley that are within Placer County, including the proposed NMMP project area. The MVCP sets forth goals, policies, assumptions, guidelines, standards and implementation measures to guide development within Martis Valley regarding fire protection and emergency medical services. The Community Plan policies and NMMP consistency are as follows:

TABLE 2

MARTIS VALLEY COMMUNITY PLAN CONSISTENCY ANALYSIS – FIRE PROTECTION AND EMERGENCY MEDICAL SERVICES

Policies	Consistency Determination	Program Level Analysis
Policy 6.A.1: Where new development requires the construction of new public facilities, the new development shall fund its fair share of the construction. The County shall require dedication of land within newly developing areas for public facilities, where necessary.	Consistent	The proposed NMMP would not require the construction of any new public facilities related to fire protection or emergency medical services. Proposed structures and facilities would be required to pay all applicable NCSD fire mitigation fees.
Policy 6.A.2: The County shall ensure through the development review process that adequate public facilities and services are available to serve new development. The County shall not approve new	Consistent	See analysis for Policy 6.A.1.

Policies	Consistency Determination	Program Level Analysis
development where existing facilities are inadequate unless the following conditions are met: a. The applicant can demonstrate that all necessary public facilities will be installed or adequately financed (through fees or other means); and b. The facility improvements are consistent with applicable facility plans approved by the County or with agency plans where the County is a participant.		
Policy 6.H.3: The County shall require new development to develop or fund fire protection facilities, personnel, and operations and maintenance that, at a minimum, maintain the above service level standards.	Consistent	See analysis for Policy 6.A.1.
Policy 6.H.11: The County shall ensure that development in high-fire-hazard areas is designed and constructed in a manner that minimizes the risk from fire hazards and meets all applicable state and county fire standards.	Consistent	The entire project site is designated as either Very High or High Fire Hazard Severity Zone. The proposed improvements would be designed and developed to meet all applicable state and local fire standards. Northstar has been implementing forest fuel reduction measures and plans to continue fuel reduction treatments as part of the Northstar Habitat Management Plan (Appendix 3.3 in the NMMP EIR).
Policy 6.H.12: The County shall require that discretionary permits for new development in fire hazard areas be conditioned to include requirements for fire-resistant vegetation, cleared fire breaks, or a long-term comprehensive fuel management program. Fire hazard reduction measures shall be incorporated into the design of development projects in fire hazard areas.	Consistent	See analysis for Policy 6.H.11.
Policy 1.I.1: The County shall require that areas hazardous to public safety and welfare be retained as open space. This category includes: a. Areas subject to avalanche, landslide, or with severe slope stability problems. b. Streams and other areas subject to flooding from a 100-year storm. c. Areas with extreme and high fire risk. d. Airport safety zones.	Consistent	See analysis for Policy 6.H.11.

1.5 NCSD/NFD Ordinances and Plans NCSD Ordinance 21-05 (Water Code)

The NCSD Water Code (Water Ordinance 21-05) provides specifications for installing water infrastructure in new development. For example, the Code requires a minimum The Water Code addresses water pressure, design flows and the placement and sizing of fire hydrants.

NCSD Ordinance 26-09 (Fuel Maintenance and Defensible Space)

The NCSD Ordinance 26-09 address wild land prevention and sets forth defensible space requirements (see Appendix D of the NMMP EPEP). The ordinance provides requirements for two types of land—residential or commercial parcels and fuel reduction zones. Residential and commercial parcels must comply with the provisions of PRC Section 4291, discussed above, and meet minimum specifications for fuel removal within 100-feet of structures. For example, the ordinance requires the following:

- maintain 5 feet of clearance of all combustible round fuels around structures;
- maintain an average pine needle/forest duff depth of 1 inch up to 100 feet from structures;
- remove tree limbs within 10 feet of any structure;
- maintain minimum standards on varying slopes for horizontal spacing between shrubs;
- remove dead or dying trees on the property; and
- remove lower tree limbs to a minimum of 8 feet or remove limbs from the bottom third of the tree for shorter trees, as measured from the lowest hanging portion of the drip line to the ground.

The ordinance also identifies requirements for management activities in fuel reduction zones, which are those areas of land not defined as Residential or Commercial, but that are within 300 feet of Residential or Commercial parcels. New development and landscape plans are also required to comply with the ordinance.

In addition to reviewing the project for compliance with the above requirements, NFD would also review the project for width and grade of roadways, spacing of fire hydrants, available water to supply fire hydrants, response times to the project from existing fire stations, and the two points of site ingress and egress.

NCSD Ordinance 28-13 (Fire Code)

The NCSD Fire Code incorporates the California Fire Code, discussed above. The Code provides measures to ensure that the NFD can access areas that have security gates, provides minimum specifications for fire department infrastructure, fire hydrants, automatic sprinkler systems and addresses. Ordinance 28-13 is provided in full in **Appendix D** of the NMMP EPEP.

Community Wildfire Protection Plan

The NFD also has adopted a Community Wildfire Protection Plan (CWPP), which identifies measures to reduce or eliminate the loss of life, property and resources caused by wildfire in the Northstar community.¹ The CWPP quantifies current risks and hazards, and sets forth the priorities for areas where fuel reduction will take place, as well as other methods for addressing fire hazards. The CWPP is updated periodically, and will next be updated in 2017.

Portions of the NMMP project area is included in the CWPP as priority fuels reduction areas.

¹ Northstar Fire Department, *Northstar Community Wildfire Protection Plan*, February 2015.

1.6 NMMP Mitigation Measures

The NMMP EIR includes mitigation to ensure that construction activities do not interfere with emergency access. The text of the mitigation measures is provided:

Mitigation Measure 4-4: Implement Construction Control Measures

Prior to Improvement Plan approval and/or during any construction, demolition, or tree removal activities requiring complete or partial closure of existing roadways, the project applicant shall perform the following tasks to the satisfaction of the Placer County Public Works Department:

- Provide written notice to property owners along affected roadways and the Northstar Fire District 1 week before roadway closures.
- Ensure public safety by clearly marking and securing roadway construction areas.
- Place steel plates over open trenches at the end of each workday (or other appropriate measures) to restore vehicle access to all residents.
- Ensure access and parking for users and residents of buildings to remain on the project site.
- Obtain written approval from the County Director of Public Works for any proposed temporary road closures or detour routes.
- Obtain written approval from the Northstar Fire Department and Cal Fire for any proposed temporary road closures or detour routes.
- Post notice of planned closure on affected roadways two weeks prior to roadway closures.

During demolition, tree removal, and construction activities, the project applicant shall limit the amount of daily construction equipment traffic by staging heavy construction equipment and vehicles on the project site at the end of each workday rather than removing them.

Clear demarcation of construction areas, including fencing, temporary walls, signage, protective barriers, and security provisions for public safety, shall be noted in the improvement plans for project components. These public safety protection features for persons using the trails system shall be in place prior to the onset of construction.

2.0 Seismic, Landslide and Avalanche Hazards

2.1 California Building Code

The State of California provides minimum standards for building design through the California Building Code (CBC [California Code of Regulations, Title 24]). The CBC is based on the Uniform Building Code, which is used widely throughout the United States (generally adopted on a state-by-state or district-by-district basis), and has been modified for conditions within California. Seismic zones range from 0 to 4, with Zone 0 being the least active and Zone 4 the most active. The Martis Valley Community Plan area is located in Seismic Zone 3 (moderate seismic risk zone). All structures built in Placer County must comply with CBC requirements for this zone.²

There are no Earthquake Fault Zones subject to the Alquist-Priolo Earthquake Fault Zoning Act in the project area.³

2.2 Placer County Avalanche Management Program

The County's avalanche management program defines Potential Avalanche Hazard Areas (PAHAs) as those areas where the minimum probability of avalanche occurrence is greater than 1 in 100 per year or where avalanche damage has already occurred. Property owners who rent their property to the public are required to post information, described below, in facilities located in PAHAs explaining avalanche hazards and available emergency services. The following are relevant Placer County General Plan policies related to avalanche hazards.

According to the County Avalanche Management Ordinance (Ordinance No. 4331-B), specific project-related information must include:

- Information that a structure is within a PAHA;
- A warning that avalanche control work, including the use of explosives, may be carried out and that avalanche control personnel may provide special advisories or instructions;
- A warning that authorities may attempt to contact property owners during periods of severe storm events, but that it is the responsibility of the occupants to use good judgment during such events; and
- Identification of local radio stations that provide weather information, phone numbers of the Office of Emergency Services and other local emergency offices, and available brochures about avalanches.
- Placer County limits construction in PAHAs and will not issue a building permit for construction in a PAHA without certifying that the structure will be safe under the anticipated snow loads and conditions of an avalanche.

The potential for the occurrence of avalanches in the project area is generally considered low; however, in areas of steep slopes (greater than 29 degrees) and minimal forestation, the potential is moderate. For example, in the vicinity of the proposed location of the V lift, steep slopes (up to approximately 44 percent) and the northerly exposure of the terrain indicate the potential for avalanches. Northstar currently manages the ski resort for hazards, including

² PMC. 2013. NMMP Draft Environmental Impact Report, page 12-9.

³ PMC. 2013. NMMP Draft Environmental Impact Report, page 12-8.

avalanche hazards, and skier safety and would either close areas of such hazards or remove conditions susceptible to avalanches.⁴

2.3 Placer County General Plan

The relevant policies of the *Placer County General Plan* (2013) with respect to hazards, including landslides and avalanche hazards, and NMMP consistency are listed below:

TABLE 3
PLACER COUNTY GENERAL PLAN CONSISTENCY ANALYSIS – GEOLOGY AND SOILS AND HAZARDS

Policies	Consistency Determination	Analysis
Policy 8.A.1: The County shall require the preparation of a soils engineering and geologic-seismic analysis prior to permitting development in areas prone to geological or seismic hazards (i.e., ground shaking, landslides, liquefaction, critically expansive soils, avalanche).	Consistent	A geotechnical investigation report was prepared for the proposed project by Marvin E. Davis & Associates, Inc., on June 10, 2008, and April 3, 2013. In addition, mitigation measures in this section require further geological investigation prior to approval of improvement plans for the project.
Policy 8.A.3: The County shall prohibit the placement of habitable structures or individual sewage disposal systems on or in critically expansive soils unless suitable mitigation measures are incorporated to prevent the potential risks of these conditions.	Consistent	Expansive soils generally have high clay content, making them capable of absorbing water and increasing in volume. According to the geotechnical investigation report, the soils underlying the project site are not clayey. Regardless, proposed sewage disposal systems would be required to comply with existing County standards, which include soil sampling to ensure the underlying soils are capable of supporting such systems. The project does not propose any new habitable structures.
Policy 8.A.4: The County shall ensure that areas of slope instability are adequately investigated and that any development in these areas incorporates appropriate design provisions to prevent landsliding.	Consistent	The geotechnical investigation report prepared for the proposed project addressed potential slope instability on the project site and determined that with implementation of design recommendations, the proposed improvements could be safely constructed on the site without increasing risk of slope instability.
Policy 8.A.5: In landslide hazard areas, the County shall prohibit avoidable alteration of land in a manner that could increase the hazard, including concentration of water through drainage, irrigation, or septic systems; removal of vegetative cover; and steepening of slopes and undercutting the bases of slopes.	Consistent	The geotechnical investigation report prepared for the proposed project concluded that the proposed improvements could be developed as planned, with implementation of the recommended measures contained in the report. These measures include slope ratio limitations and revegetation. In addition, the Northstar Habitat Management Plan (HMP) provides design and management practices to minimize the alteration of the site's natural topography, hydrology and vegetation and to promote soil stabilization. Mitigation measures in this section provide further requirements to ensure slope stability.

⁴ PMC. 2013. NMMP Draft Environmental Impact Report, page 12-19.

Policies	Consistency Determination	Analysis
Policy 8.A.6: The County shall require the preparation of drainage plans for development in hillside areas that direct runoff and drainage away from unstable slopes.	Consistent	The project applicant has provided preliminary drainage reports that address drainage impacts (see Section 13.0, Hydrology and Water Quality). Drainage plans for the proposed improvements will be required to conform to the provisions of the County Grading Ordinance (Article 15.48 of the Placer County Code) and will be submitted with the project Improvement Plans. In addition, the recommendations provided in the geotechnical investigation report prepared for the proposed project include measures to divert drainage flows away from slope faces.
Policy 8.A.9: The County shall require that the location and/or design of any new buildings, facilities, or other development in areas subject to earthquake activity minimize exposure to danger from fault rupture or creep.	Consistent with Mitigation	Active faults could be located within the proposed alignments of the J lift and C lift. Mitigation measures in this section require the preparation of a geologic investigation to confirm the location of any active faults and provide necessary setbacks and other design parameters to minimize risks of fault rupture or creep in accordance with the Alquist-Priolo Earthquake Fault Zoning Act. In addition, all proposed improvements would be designed and constructed in accordance with CBC requirements that address structural seismic safety.
Policy 8.A.10: The County shall require that new structures permitted in areas of high liquefaction potential be sited, designed, and constructed to minimize the dangers from damage due to earthquake-induced liquefaction.	Consistent	All proposed improvements would be designed and constructed in accordance with the CBC requirements that address structural seismic safety.
Policy 8.A.11: The County shall limit development in areas of steep or unstable slopes to minimize hazards caused by landslides or liquefaction.	Consistent	There are steep slopes (exceeding 29 degrees) at higher elevations within the project site such as the proposed location of the V lift. However, the proposed project does not propose any habitable structures in these locations. Further, the geotechnical investigation report prepared for the proposed project concluded that the proposed improvements could be constructed as planned with implementation of the recommendations contained in the report without risk of slope instability.
Policy 8.H.2: The County shall require new development in areas of avalanche hazard to be sited, designed, and constructed to minimize avalanche hazards.	Consistent	Steep, unforested areas of the project site could be at risk of avalanche. However, improvements proposed in these areas are limited to ski lift towers, which would be designed and constructed to withstand an avalanche.
Policy 8.H.3: The County shall not issue permits for new development in potential avalanche hazard areas (PAHA) as designated in the Placer County Avalanche Management Ordinance unless project proponents can demonstrate that such development will be safe under anticipated	Consistent	Steep, unforested areas of the project site could be at risk of avalanche. However, improvements proposed in these areas are limited to ski lift towers, which would be designed and constructed to withstand an avalanche.

Policies	Consistency Determination	Analysis
snow loads and conditions of an avalanche.		

2.4 Martis Valley Community Plan

The relevant Martis Valley Community Plan policies with respect to hazards and NMMP consistency are listed below:

TABLE 4
MARTIS VALLEY COMMUNITY PLAN CONSISTENCY ANALYSIS –
GEOLOGY AND SOILS

Policies	Consistency Determination	Analysis
Policy 9.A.1: The County shall require the preparation of a soils or geologic investigation prior to permitting development in areas of known or suspected geological or seismic hazards (i.e., seismically induced ground shaking, landslides, liquefaction, critically expansive soils, avalanche).	Consistent with Mitigation	A geotechnical investigation report was prepared for the proposed project by Marvin E. Davis & Associates, Inc., on June 10, 2008, and April 3, 2013. In addition, mitigation measures in this section require further geological investigation prior to approval of improvement plans for the project.
Policy 9.A.3: The County shall prohibit the placement of habitable structures or individual sewage disposal systems on or in critically expansive soils unless suitable mitigation measures are incorporated to prevent the potential risks of these conditions.	Consistent	Expansive soils generally have a high clay content, making them capable of absorbing water and increasing in volume. According to the geotechnical investigation report, the soils underlying the project site are not clayey. Regardless, proposed sewage disposal systems would be required to comply with existing County standards, which include soil sampling to ensure the underlying soils are capable of supporting such systems. The project does not propose any new habitable structures.
Policy 9.A.4: The County shall ensure that areas of slope instability are adequately investigated and that any development in these areas incorporates appropriate design provisions to prevent landsliding.	Consistent	The geotechnical investigation report prepared for the proposed project addressed potential slope instability on the project site and determined that with implementation of design recommendations, the proposed improvements could be safely constructed on the site without increasing risk of slope instability.
Policy 9.A.5: In landslide hazard areas, the County shall prohibit alteration of land in a manner that could increase the hazard, including concentration of water through drainage, irrigation, or septic systems; removal of vegetative cover; and steepening of slopes and undercutting the bases of slopes.	Consistent with Mitigation	The geotechnical investigation report prepared for the proposed project concluded that the proposed improvements could be developed as planned, with implementation of the recommended measures contained in the report. These measures include slope ratio limitations and revegetation. In addition, the Northstar HMP provides design and management practices to minimize the alteration of the site's natural topography, hydrology, and vegetation and to promote soil stabilization. Mitigation measures provide further requirements to ensure slope stability.
Policy 9.A.6: The County shall require drainage plans for development in mountainous and sloping areas that direct	Consistent	The project applicant has provided preliminary drainage reports that address drainage impacts

Policies	Consistency Determination	Analysis
runoff and drainage away from unstable slopes.		(see Section 13.0, Hydrology and Water Quality). Drainage plans for the proposed improvements will be required to conform to the provisions of the County Grading Ordinance (Article 15.48 of the Placer County Code) and will be submitted with the project Improvement Plans. In addition, the recommendations provided in the geotechnical investigation report prepared for the proposed project include measures to divert drainage flows away from slope faces.
Policy 9.A.8: The County shall require that the location and/or design of any new buildings, facilities, or other development in areas subject to earthquake activity minimize exposure to danger from fault rupture or creep.	Consistent with Mitigation	Active faults could be located within the proposed alignments of the J lift and C lift. Mitigation measures in this section require the preparation of a geologic investigation to confirm the location of any active faults and provide necessary setbacks and other design parameters to minimize risks of fault rupture or creep in accordance with the Alquist-Priolo Earthquake Fault Zoning Act. In addition, all proposed improvements would be designed and constructed in accordance with CBC requirements that address structural seismic safety.
Policy 9.A.9: The County shall limit development in areas of steep (in excess of 30% or in some cases between 20 and 30%) or unstable slopes to minimize hazards caused by landslides or liquefaction and to reduce grading and disturbance to such slopes.	Consistent with Mitigation	There are steep slopes (exceeding 29 degrees) at higher elevations within the project site such as the proposed location of the V lift where project features (lift structures and trails) are proposed. The proposed project does not propose any habitable structures in these locations. Further, the geotechnical investigation report prepared for the proposed project concluded that the proposed improvements could be constructed as planned with implementation of the recommendations contained in the report without risk of slope instability. Mitigation measures identified in this section would further ensure slope stability.
Policy 9.B.2: The County shall require new development in areas of avalanche hazard to be sited, designed, and constructed to minimize avalanche hazards.	Consistent	Steep, unforested areas of the project site could be at risk of avalanche. However, improvements proposed in these areas are limited to ski lift towers, which would be designed and constructed to withstand an avalanche. In addition, Northstar would continue to manage the ski resort for avalanche hazards, such as closing of avalanche areas or removal of conditions susceptible to avalanches.
Policy 9.B.3: The County shall not issue permits for new development in potential avalanche hazard areas (PAHA) as designated in the Placer County <i>Avalanche Management Ordinance</i> unless project proponents can demonstrate that such development will be safe under anticipated snow loads and conditions of an avalanche.	Consistent	Steep, unforested areas of the project site could be at risk of avalanche. However, improvements proposed in these areas are limited to ski lift towers, which would be designed and constructed to withstand an avalanche.

2.5 NMMP Mitigation Measures

The project site is located in a potentially active seismic area, and there are a number of faults in the project area. In particular, fault traces of the Dollar Point Fault Zone have been identified in the vicinity of the proposed alignments of the J lift and C lift. Although the proposed improvements at these locations do not include any structures for human occupancy, the presence of an active fault could expose employees and skiers to risk of loss, injury, or death involving fault rupture. The NMMP EIR includes mitigation to ensure that hazards are mitigated as follows:

MITIGATION MEASURE 12-1 Require Lift Design to Avoid Fault Hazard

The Improvement Plan submittal for either the J or C lift shall include a geologic investigation produced by a California registered civil engineer or geotechnical engineer to determine if any active faults cross the proposed lift alignments. If an active fault is identified, the geologic investigation shall establish necessary setbacks (generally 50-foot minimums) and other design parameters for proposed lift terminals as required by the Alquist-Priolo Earthquake Fault Zoning Act.

MITIGATION MEASURE 12-3a Provide Final Geotechnical Subsurface Investigation

The Improvement Plan submittal shall include a final geotechnical engineering report produced by a California registered civil engineer or geotechnical engineer for Placer County Engineering and Surveying Department (ESD) review and approval. The report shall address and make recommendations on the following:

- A) Road, pavement, and parking area design (if applicable);
- B) Structural foundations, including retaining wall design (if applicable);
- C) Grading practices;
- D) Erosion/winterization;
- E) Special problems discovered on-site (i.e., groundwater, expansive/unstable soils, etc.);
- F) Slope stability.

Once approved by the ESD, two copies of the final report shall be provided to the ESD and one copy to the Building Services Division for its use. It is the responsibility of the developer to provide for engineering inspection and certification that earthwork has been performed in conformity with recommendations contained in the report. If the soils report indicates the presence of critically expansive or other soils problems that, if not corrected, could lead to structural defects, a certification of completion of the requirements of the soils report will be required.

MITIGATION MEASURE 12-3b Submit Improvement Plans for Review and Approval

The applicant shall prepare and submit Improvement Plans, specifications, and cost estimates (per the requirements of Section II of the Land Development Manual [LDM] that are in effect at the time of submittal) to the Engineering and Surveying Division (ESD) for review and approval of each project phase. The plans shall show all physical improvements as required by the conditions for the project as well as pertinent topographical features both on- and off-site. All existing and proposed utilities and easements, on-site and adjacent to the project, which may be affected by planned construction, shall be shown on the plans. The applicant shall pay plan check and inspection fees with the first Improvement Plan submittal. (Note: Prior to plan approval, all applicable recording and reproduction cost shall be paid.) It is the applicant's responsibility to obtain all required agency signatures on the plans and to secure department

approvals. If the Design/Site Review process and/or Development Review Committee (DRC) review is required as a condition of approval for the project, said review process shall be completed prior to submittal of Improvement Plans. Record drawings shall be prepared and signed by a California registered civil engineer at the applicant's expense and shall be submitted to the ESD in both hard copy and electronic versions in a format to be approved by the ESD prior to acceptance by the County of site improvements.

Any Building Permits associated with this project shall not be issued until, at a minimum, the Improvement Plans are approved by the Engineering and Surveying Department.

Prior to the County's final acceptance of the project's improvements, the applicant shall submit to the Engineering and Surveying Department two copies of the Record Drawings in digital format (on compact disc or other acceptable media) in accordance with the latest version of the Placer County Digital Plan and Map Standards, along with two blackline hardcopies (black print on bond paper) and two PDF copies. The digital format is to allow integration with Placer County's Geographic Information System (GIS). The final approved blackline hardcopy Record Drawings will be the official document of record.

MITIGATION MEASURE 12-3c Grading, Revegetation, and Winterization Requirements

The Improvement Plans shall show all proposed grading, drainage improvements, and vegetation and tree removal, and all work shall conform to provisions of the County Grading Ordinance (Ref. Article 15.48, Placer County Code) and Stormwater Quality Ordinance (Ref. Article 8.28, Placer County Code) that are in effect at the time of submittal. No grading, clearing, or tree disturbance (except per the current timber harvest plan) shall occur until the Improvement Plans are approved and all temporary construction fencing has been installed and inspected by a member of the Development Review Committee (DRC). All cut/fill slopes shall be at a maximum of 2:1 (horizontal: vertical) unless a soils report supports a steeper slope and the Engineering and Surveying Department (ESD) concurs with said recommendation. Fill slopes shall not exceed 1.5:1 (horizontal: vertical).

The applicant shall revegetate all disturbed areas. A winterization plan shall be provided with project Improvement Plans. It is the applicant's responsibility to ensure proper installation and maintenance of erosion control/winterization before, during, and after project construction. Soil stockpiling or borrow areas shall have proper erosion control measures applied for the duration of the construction as specified in the Improvement Plans. Provide for erosion control where roadside drainage is off of the pavement, to the satisfaction of the Engineering and Surveying Department (ESD).

The applicant shall submit to the ESD a letter of credit or cash deposit in the amount of 110 percent of an approved engineer's estimate for winterization and permanent erosion control work prior to Improvement Plan approval to guarantee protection against erosion and improper grading practices. Upon the County's acceptance of improvements, and satisfactory completion of a one-year maintenance period, unused portions of said deposit shall be refunded to the project applicant or authorized agent.

If, at any time during construction, a field review by County personnel indicates a significant deviation from the proposed grading shown on the Improvement Plans, specifically with regard to slope heights, slope ratios, erosion control, winterization, tree disturbance, and/or pad elevations and configurations, the plans shall be reviewed by the DRC/ESD for a determination of substantial conformance to the project approvals prior to any further work proceeding. Failure

of the DRC/ESD to make a determination of substantial conformance may serve as grounds for the revocation/modification of the project approval by the appropriate hearing body.

MITIGATION MEASURE 12-3d Water Quality Permit Coverage

Prior to Improvement Plan approval, the applicant shall obtain a State Regional Water Quality Control Board National Pollutant Discharge Elimination System (NPDES) construction stormwater quality permit and shall provide to the Engineering and Surveying Department evidence of a state-issued Waste Discharge Identification (WDID) number or filing of a Notice of Intent and fees.

MITIGATION MEASURE 12-3e Implementation of Best Management Practices

The Improvement Plans shall show that water quality treatment facilities/best management practices (BMPs) shall be designed according to the guidance of the California Stormwater Quality Association Stormwater Best Management Practice Handbooks for Construction, for New Development/Redevelopment, and for Industrial and Commercial (or other similar source as approved by the Engineering and Surveying Department (ESD) such as the Stormwater Quality Design Manual for the Sacramento and South Placer Regions).

Construction (temporary) BMPs for the project include, but are not limited to, waterbars, hydroseeding (EC-4), silt fence (SE-1), construction fencing, wind erosion control (WE-1), stabilized construction entrance (TC-1), storm drain inlet protection (SE-10), staging areas, dripline trenches, and revegetation techniques.

MITIGATION MEASURE 12-3f Improvement Plan Measures for Water Quality Protection

The Improvement Plan submittal shall include the following requirements:

- A) There shall be no grading or other disturbance of ground between October 15 of any year and May 1 of the following year, unless a Variance has been granted by the Lahontan Regional Water Quality Control Board (RWQCB) and the Placer County ESD.
- B) Truck routes are to be located across existing logging roads and constructed seasonal spur roads proposed with this project.
- C) Existing drainage patterns shall not be significantly modified.
- D) During construction, temporary gravel, straw bale, earthen, or sandbag dikes and/or nonwoven filter fabric fence shall be used as necessary to prevent discharge of earthen materials from the site during periods of precipitation or runoff.
- E) Revegetated areas shall be continually maintained in order to assure adequate growth and root development. Erosion control facilities shall be installed with a routine maintenance and inspection program to provide continued integrity of erosion control facilities.

3.0 Flood Regulations

3.1 National Flood Insurance Act

The Federal Emergency Management Agency (FEMA) is tasked with responding to, planning for, recovering from and mitigating against disasters. Formed in 1979 to merge many of the separate disaster related responsibilities of the federal government into one agency, FEMA is responsible for coordinating the federal response to floods, earthquakes, hurricanes, and other natural or man-made disasters and providing disaster assistance to states, communities and individuals. The Federal Insurance and Mitigation Administration within FEMA is responsible for administering the National Flood Insurance Program (NFIP) and administering programs that provide assistance for mitigating future damages from natural hazards. Established in 1968 with the passage of the National Flood Insurance Act, the NFIP is a federal program enabling property owners in participating communities to purchase insurance as a protection against flood losses in exchange for state and community floodplain management regulations that reduce future flood damages. Participation in the NFIP is based on an agreement between communities and the federal government. If a community adopts and enforces a floodplain management ordinance to reduce future flood risk to new construction in floodplains, the federal government will make flood insurance available within the community as a financial protection against flood losses. This insurance is designed to provide an insurance alternative to disaster assistance to reduce the escalating costs of repairing damage to buildings and their contents caused by floods. Placer County participates in the NFIP by adopting and enforcing floodplain management ordinances to reduce future flood damage.

3.2 Placer County General Plan

The relevant policies of the *Placer County General Plan* (2013) with respect to flood-related policies and NMMP consistency are listed below:

TABLE 5
GENERAL PLAN CONSISTENCY ANALYSIS – HYDROLOGY AND WATER
QUALITY AND FLOODING

Policies	Consistency Determination	Analysis
Policy 4.E.1: The County shall encourage the use of natural stormwater drainage systems to preserve and enhance natural features.	Consistent	The proposed NMMP would utilize existing drainage features as well as include drainage features to allow sheet flow and infiltration to retain existing runoff rates.
Policy 4.E.4: The County shall ensure that new storm drainage systems are designed in conformance with the Placer County Flood Control and Water Conservation District's Stormwater Management Manual and the County Land Development Manual.	Consistent	The proposed NMMP would utilize existing drainage features as well as include drainage features to allow sheet flow and infiltration to retain existing runoff rates. The project applicant has prepared a Preliminary Drainage Report and Addendum Memorandum that were prepared in conformance with the PCFCWCD Storm Water Management Manual and the Placer County Land Development Manual (Appendix 13).
Policy 4.E.10: The County shall strive to improve the quality of runoff from urban and suburban development through use of appropriate and feasible mitigation measures including, but not limited to, artificial wetlands, grassy swales, infiltration/sedimentation basins, riparian setbacks,	Consistent	The proposed NMMP would utilize existing drainage features as well as include drainage features that include water quality control features such as infiltration trenches, vegetative swales, and construction-related BMPs.

Policies	Consistency Determination	Analysis
oil/grit separators, and other best management practices (BMPs).		
Policy 4.E.11: The County shall require new development to adequately mitigate increases in stormwater peak flows and/or volume. Mitigation measures should take into consideration impacts on adjoining lands in the unincorporated area and on properties in jurisdictions within and immediately adjacent to Placer County.	Consistent with Mitigation	The proposed NMMP would utilize existing drainage features as well as include drainage features to allow sheet flow and infiltration to retain existing runoff rates. The project applicant has prepared a Preliminary Drainage Report and Addendum Memorandum that were prepared in conformance with the PCFCWCD Storm Water Management Manual and the Placer County Land Development Manual and that identify the project's ability to mitigate increases in drainage flows (Appendix 13).
Policy 4.E.12: The County shall encourage project designs that minimize drainage concentrations and impervious coverage and maintain, to the extent feasible, natural site drainage conditions.	Consistent	The proposed NMMP would utilize existing drainage features as well as include drainage features that include water quality control features such as infiltration trenches, vegetative swales, and construction-related BMPs. These features are described in Section 3.0, Project Description, and are shown on proposed NMMP project-level component grading plans in Appendix 3.1 .
Policy 4.E.13: The County shall require that new development conforms with the applicable programs, policies, recommendations, and plans of the Placer County Flood Control and Water Conservation District.	Consistent	The Preliminary Drainage Report for the project identifies that the storm drainage collection and conveyance system would be designed consistent with the PCFCWCD Storm Water Management Manual (Appendix 13).
Policy 4.E.14: The County shall require projects that have significant impacts on the quantity and quality of surface water runoff to allocate land as necessary for the purpose of detaining post-project flows and/or for the incorporation of mitigation measures for water quality impacts related to urban runoff.	Consistent with Mitigation	See analysis under Policies 4.E.11 and 4.E.12.
Policy 4.F.4: The County shall require evaluation of potential flood hazards prior to approval of development projects. The County shall require proponents of new development to submit accurate topographic and flow characteristics information and depiction of the 100-year floodplain boundaries under fully-developed, unmitigated runoff conditions.	Consistent with Mitigation	See analysis under Policy 4.E.11. Grading plans for proposed NMMP project-level components map the 100-year floodplain (Appendix 3.1).
Policy 6.B.3: The County shall discourage direct runoff of pollutants and siltation into wetland areas from outfalls serving nearby urban development. Development shall be designed in such a manner that pollutants and siltation will not significantly adversely affect the value or function of wetlands.	Consistent	See analysis under Policy 4.E.12.

3.3 Martis Valley Community Plan

The Public Facilities and Services Element (Section VI) of the MVCP addresses flood protection.

TABLE 6

MARTIS VALLEY COMMUNITY PLAN CONSISTENCY ANALYSIS – HYDROLOGY AND WATER QUALITY AND FLOODING

Policies	Consistency Determination	Analysis
Policy 6.F.4: The County shall require evaluation of potential flood hazards prior to approval of development projects. The County shall require proponents of new development to submit accurate topographic and flow characteristics information and depiction of the 100-year floodplain boundaries under fully-developed, unmitigated runoff conditions.	Consistent	See analysis under Policy 4.F.4. Grading plans for proposed NMMP project-level components map the 100-year floodplain (Appendix 3.1).
Policy 6.F.11: The County shall promote the use of natural or non-structural flood control facilities, including off-stream flood control basins, to preserve and enhance creek corridors.	Consistent	See analysis for Policy 4.E.1.
Policy 9.D.4: The County shall require public and private development to address creeks and riparian corridors as follows: (e) Use design, construction, and maintenance techniques that ensure development near a creek will not cause or worsen natural hazards (such as erosion, sedimentation, flooding, or water pollution) and will include erosion and sediment control practices such as: (1) turbidity screens and other management practices, which shall be used as necessary to minimize siltation, sedimentation, and erosion, and shall be left in place until disturbed areas are stabilized with permanent vegetation that will prevent the transport of sediment off site; and/or (2) temporary vegetation is established sufficient to stabilize disturbed areas.	Consistent	See analysis for Policies 4.E.1. and 4.F.4.
Policy 9.D.5: The County shall continue to require the use of feasible and practical best management practices (BMPs) to protect streams from the adverse effects of construction activities and urban runoff and to encourage the use of BMPs for agricultural activities.	Consistent	See analysis for Policy 4.E.4.
Policy 9.D.7: The County shall discourage grading activities during the rainy season, unless adequately mitigated, to avoid sedimentation of creeks and damage to riparian habitat.	Consistent	The RWQCB prohibits ground disturbance activities between October 15 and May 1.

3.4 Placer County Flood Control and Water Conservation District

The Placer County Flood Control and Water Conservation District (PCFCWCD) was formed by legislative resolution on Senate Bill 1312 and made effective on August 23, 1984. Formulation and guidance of the PCFCWCD was made by consensus of other participating local government agencies, including the Placer Resource Conservation District and Soil Conservation Service. The objective of PCFCWCD is to reduce the effects of flooding by maintenance of drainage basins and the use of detention/retention basins; offer technical support; perform studies, advise, and collect data; and coordinate with adjacent jurisdictions. The PCFCWCD's Stormwater Management Manual (1990) includes standards and methods for the planning and design of drainage and flood control infrastructure.

3.5 NMMP EIR Mitigation Measures

The NMMP EIR includes mitigation to ensure that drainage facilities are designed to County standards, and the risk of flooding is minimized, as per below.

MITIGATION MEASURE 13-1a Implement Construction Water Quality Controls

The project applicant shall prepare a stormwater pollution prevention plan (SWPPP), which describes the site, erosion, and sediment controls identified in Draft EIR Section 3.0, Project Description, and in the Northstar Habitat Management Plan, means of waste disposal, implementation of approved local plans, control of post-construction sediment and erosion control measures and maintenance responsibilities, and non-stormwater management controls. The SWPPP shall be submitted to the Lahontan Regional Water Quality Control Board for review. The applicant shall require all construction contractors to retain a copy of the approved SWPPP on the construction site. Best management practices identified in the SWPPP shall be utilized in all subsequent site development activities. Water quality controls shall be consistent with the Placer County Grading Ordinance and the Lahontan RWQCB's Lahontan Regional Project Guidelines for Erosion Control and will demonstrate that the water quality controls will ensure compliance with all current requirements of the County and the Lahontan Regional Water Quality Control Board. Water quality controls shall ensure that runoff meets the Water Quality Control Plan for the Lahontan Region (Basin Plan) water quality objectives for Martis Creek, as well as comply with the Basin Plan's narrative water quality objectives and the state antidegradation policy, and maintain beneficial uses of Martis Creek and the Martis Creek Reservoir as defined by the Basin Plan. Stormwater quality sampling and reporting associated with the SWPPP shall be the responsibility of the project applicant.

MITIGATION MEASURE 13-1b Grading Restrictions

Grading activities and other disturbance shall be prohibited during the winter months (between October 15 and May 1), unless otherwise approved by the County and the Lahontan Regional Water Quality Control Board. Exposed graded areas shall be protected during the winter months using appropriate methods.

MITIGATION MEASURE 13-1c Compliance with NPDES Phase II Program

This project is located in the area covered by Placer County's municipal stormwater quality permit, pursuant to the National Pollutant Discharge Elimination System (NPDES) Phase II program. Project-related stormwater discharges are subject to all applicable requirements of said permit. Best management practices (BMPs) shall be designed to mitigate (minimize, infiltrate, filter, or treat) stormwater runoff in accordance with "Attachment 4" of Placer County's NPDES Municipal Stormwater Permit (State Water Resources Control Board NPDES General Permit No. CAS000004, Board Order 2003-005-DWQ) and shall be shown on the Improvement Plans.

MITIGATION MEASURE 13-2 Implement Water Quality Controls for Project Components

The Improvement Plans shall show that water quality treatment facilities/Best Management Practices (BMPs) shall be designed according to the guidance of the California Stormwater Quality Association Stormwater Best Management Practice Handbooks for Construction, for New Development/Redevelopment, and for Industrial and Commercial (or other similar source as approved by the Engineering and Surveying Department (ESD) such as the Stormwater Quality Design Manual for the Sacramento and South Placer Regions).

Storm drainage from on- and off-site impervious surfaces (including roads) shall be collected and routed through specially designed catch basins, vegetated swales, vaults, infiltration basins, water quality basins, filters, etc., for entrapment of sediment, debris, and oils/greases or other identified pollutants, as approved by the Engineering and Surveying Department (ESD). BMPs shall be designed at a minimum in accordance with the Placer County Guidance Document for Volume and Flow-Based Sizing of Permanent Post-Construction Best Management Practices for Stormwater Quality Protection. Post-development (permanent) BMPs for the project include, but are not limited to, infiltration trenches, vegetated swales, revegetation and soil stabilization, waterbars, etc. No water quality facility construction shall be permitted within any identified wetlands area, floodplain, or right-of-way, except as authorized by project approvals.

All BMPs shall be maintained as required to ensure effectiveness. Proof of ongoing maintenance, such as contractual evidence, shall be provided to the ESD upon request. Maintenance of these facilities shall be provided by the project owners/permittees.

MITIGATION MEASURE 13-3a Submit Final Drainage Report for Review and Approval

The Improvement Plan submittal shall include a final drainage report, in conformance with the requirements of Section 5 of the Land Development Manual and the Placer County Storm Water Management Manual that are in effect at the time of submittal, to the Engineering and Surveying Department for review and approval. The report shall be prepared by a registered civil engineer and shall, at a minimum, include a written text addressing existing conditions, the effects of the improvements, all appropriate calculations, a watershed map, increases in downstream flows, proposed on- and off-site improvements, and drainage easements to accommodate flows from this project. The report shall identify water quality protection features and methods to be used both during construction and for long-term post-construction water quality protection. Best management practice measures shall be provided to reduce erosion and water quality degradation and to prevent the discharge of pollutants to stormwater to the maximum extent practicable.

MITIGATION MEASURE 13-3d Address Drainage Changes with Program-Level Components

Prior to environmental determination for new development within the NMMP program-level components, a project-level, site-specific analysis of the drainage impacts associated with these facilities shall be provided to Placer County. The project-level analysis shall include a site-specific analysis based on the specific improvements proposed to the satisfaction of Placer County. Additional mitigation measures shall be included in the analysis as required based on the project-level site-specific impacts.

MITIGATION MEASURE 13-4 Bridge and Culvert Design

As part of the submittal of the final drainage report for each phase of the project and included in improvement plans, the report shall include the following:

- Show the limits of the future, unmitigated, fully developed 100-year floodplain for the tributaries under the proposed skier bridges and near the bottom terminals for lifts V and W on the Improvement Plans. Skier bridge number 1 includes a center pier within the 100-year floodplain.
- In order to protect site resources, no grading activities of any kind may take place within the 100-year floodplain of the stream/drainage way, unless otherwise approved as a part of this project (skier bridge number 1). All work shall conform to provisions of the County

Flood Damage Prevention Regulations (Section 15.52, Placer County Code). The location of the 100-year floodplain shall be shown on the Improvement Plans.

- The project applicant shall prepare a final drainage report, which shall demonstrate that the proposed skier bridge number 1 will not significantly increase the limits or water surface elevation of the 100year floodplain upstream and downstream of the proposed improvements to the satisfaction of the Engineering and Surveying Department and the Placer County Flood Control and Water Conservation District.
- All required approvals associated with construction-related stormwater permit requirements of the current federal Clean Water Act National Pollutant Discharge Elimination System (NPDES) program and other associated permit approvals from the Lahontan Regional Water Quality Control Board.

5.0 References

California Board of Forestry and Fire Protection, CalFire, *Ignition Management Plan, Battalion 15*.

California Board of Forestry and Fire Protection, SRA Fire Safe Regulations, January 1, 2016 (CCR Title 14, Chapter 1.5).

Northstar California Emergency Response Plan (ERP), September 2016.

Northstar California Traffic and Parking Management Plan, 2013.

Northstar Fire Department, Northstar Community Wildfire Protection Plan, February 2015.

Northstar Fire Department, *Emergency Preparedness and Evacuation Guide*.

Northstar Fire Department, *Your Northstar Fire Department*.

North Tahoe Fire Protection District, *About Us*.

PMC, Northstar Mountain Master Plan Draft Environmental Impact Report, 2013.

Placer County Code Article 12.40 (Avalanche Management Ordinance).

Placer County Code Section 15.04.700 (Fire Code).

Placer County General Plan, May 21, 2013.

Placer County, Martis Valley Community Plan, 2003.

State of California, Public Resources Code Sections 4290 and 4291.

State of California Code of Regulations Title 24, California Building Code.